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WORLD CACAO-BEAN PRODUCTION AND TRADE

By

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WORLD CACAO-BEAN PRODUCTION AND TRADE

World production of cacao beans has been on a relatively low level in the post-war period and probably will continue below world consumption requirements for some time. World output in 1947-48, estimated at 1,347 million pounds, is 5 percent less than the previous season's outturn of 1,424 million pounds and is 15 percent below the average annual production of about 1,579 million pounds during 1935-39. The decrease in 1947-48 production, in comparison with prewar years, is not confined to one area, but is found in nearly all producing countries. In the few cases where increases have occurred they are small. Africa accounts for about 66 percent of total world cacao production, Latin America 33, and Asia and Oceania 1 percent.

The current low production appears to be the result of several factors. Weather conditions were generally unfavorable for the 1947-48 crop. Droughts reduced yields by causing fewer pods to form, and heavy rains at harvesttime not only prevented the gathering of all the fruit, but they were conducive to the spread of black-pod disease. The cacao trees in most countries have passed their peak production periods, and the number of young trees is insufficient to take their place. Cacao trees do not bear until the fourth or fifth year and do not reach maximum production until the tenth or twelfth. Cacao growing in the late 1930's was not particularly remunerative; consequently, little care was taken of the cacao stands, and the normal amount of replacement and new plantings that would now be coming into full production was not made. Uncertain marketing conditions during the war, shortage of labor, and more attractive financial returns from other pursuits led to further neglect of the trees, with the result that diseases became widespread in West Africa and in certain of the Latin American producing countries. The control of swollen shoot and witches'-broom, the most harmful of cacao diseases, is most difficult. The only known preventive for swollen shoot is the destruction of the infected trees, and for witches'-broom, the planting of trees which are resistant to the disease.

Rapid improvement in the cacao-supply situation can hardly be expected. Rehabilitation seems to call for extensive replanting with high-yielding, disease-resistant trees and the establishment of new plantings in suitable areas. Obviously this program is incapable of realization in a short time. Improved cultural methods, including more careful harvesting and disease-prevention measures now being practiced in most producing countries, should result in somewhat larger yields, but production probably will continue below requirements for several years.

BACKGROUND OF CACAO INDUSTRY

Although the cacao bean was used by man long before the discovery of the New World, commercial production on a large scale is a development of the past 50 years. Until 1939, despite minor setbacks, the trend in world production was definitely upward, output increasing from about 191 million pounds in 1898 to 1,724 million pounds in 1939. Since 1939, the trend has been downward. World production for the 1947-48 season, estimated at 1,347 million pounds, is the smallest in several years. (See table 1.)

In 1900, the American Tropics produced about 81, and Africa 16, percent of the world's cacao. In 1910, out of total world exports of about 481 million pounds, the New World's share had dropped to 65 percent and Africa's had increased to 32 percent. By the end of the next decade, world exports almost doubled, reaching a total of 815 million pounds, of which Latin American producing countries supplied 50 and Africa 48 percent. Since 1920, Africa's share has continued to increase until that continent

now produces about 66 percent of the cacao entering world trade. Latin America supplies approximately 33 percent, and Asia and Oceania, 1 percent.

The shift in the center of production has brought with it the predominance of base, or ordinary, grades of cacao over the fine, or flavor, grades. Africa produces ordinary cacao almost entirely. Venezuela, Ecuador, and the British West Indies produce the bulk of the fine cacao. Fine cacaos now constitute about 10 percent of the total production, compared with 65 percent in 1900. The principal cause of the decline was the planting of Forastero types, which produce ordinary cacaos, instead of the Criollo types, from which the fine cacaos are obtained. The Forasteros have been preferred, because they are hardier and have larger yields than the Criollos. Chocolate manufacturers, in the absence of sufficient supplies of fine cacao, have developed processes enabling them to use increased quantities of ordinary cacao. Also, ordinary cacaos are used for the extraction of cacao butter, large quantities of which are used in the manufacture of chocolate confections.

Cacao beans are harvested the year around, but in most countries there are two principal harvest periods, designated as the main crop and the mid or intermediate crop (table 2). Approximately 80 percent of the world's cacao is harvested from September through March and 20 percent from April through August.

Two systems of management are followed in cacao production, commonly designated as plantation and native. Under the plantation system, landholdings usually exceed 100 acres, and hired laborers carry on the necessary operations. In the colonial possessions, plantation owners frequently are Europeans. Under the native system, holdings are small, generally from 1 to 10 acres. The peasant owner and his family do most of the work. Advanced cultural practices and improved methods of fermentation and drying can more readily be employed on large plantations than on small scattered holdings. Yields of plantation cacao are generally higher, and the cured product is more uniform than native cacao. Despite the advantages of plantation methods, the native system predominates. In a country where the peasant type of agriculture prevails, a knowledge of the psychology and customs of the native grower is essential to any program directed toward improving the cacao industry. The native must be made to see the advantage of properly caring for his trees and of fermenting and drying the beans according to approved procedures. Disease-eradication measures must be discussed with him and his cooperation obtained, all of which frequently entails an extensive program of rural education. This has not been adequately done, with the result that much of the decline in world output of cacao has occurred from decreased production of cacao grown by natives.

DECLINE IN WORLD PRODUCTION

The low prices for cacao beans prevailing for nearly a decade (table 3) before World War II are responsible in large part for the present inadequate output. Cacao plantings began to decrease after reaching a peak in the period 1926-28, when prices for beans were remunerative. Trees planted during that period reached maximum bearing about 1939, during which year the average New York spot price for Accra, a representative ordinary grade of cacao, was 4.8 cents a pound. This unremunerative price not only discouraged the planting of new trees but also led to the neglect of those already in existence. Diseases were permitted to spread unchecked, trees were not pruned, and some plantations were abandoned.

During World War II, the closing of European markets, shipping uncertainties, shortage of labor, and the necessity for producing other crops caused further deterioration of cacao holdings. Immediately after the war, particularly in Africa, the

TABLE I.- *Estimated production of cacao beans in principal producing countries, average 1935-39, annual 1945-48* [1]

COUNTRY	AVERAGE 1935-39[2]	1945-46	1946-47	1947-48[3]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
AFRICA				
Belgian Congo	2,809	2,600	2,500	3,300
French Cameroons	58,349	77,160	80,000	93,000
Ivory Coast and Dahomey	109,937	79,365	55,115	72,000
Gold Coast and Togo	609,363	469,000	430,000	480,000
Nigeria and Cameroons	216,318	229,000	246,000	180,000
San Thome and Principe	22,496	23,000	20,000	18,000
Spanish Guinea	25,000	38,000	29,000	37,000
Others [4]	10,599	9,103	8,485	8,420
Total	1,054,871	927,228	871,100	891,720
THE AMERICAS				
Costa Rica	14,356	10,110	9,540	10,500
Mexico	2,500	5,860	6,500	15,000
Panama Republic	10,418	4,800	6,500	6,600
Cuba	7,000	5,000	6,000	7,000
Dominican Republic	54,049	55,100	69,500	60,000
Haiti	3,349	3,000	4,000	4,400
Jamaica	4,750	3,360	4,160	3,800
Grenada	8,536	5,200	5,700	4,800
Trinidad and Tobago	31,635	9,000	10,000	9,000
Brazil	263,980	220,715	312,419	218,260
Colombia	25,000	16,535	24,250	26,000
Ecuador	42,373	37,337	37,200	35,000
Venezuela	36,934	38,000	40,000	40,000
Others [5]	1,307	1,300	1,350	1,350
Total	506,187	415,317	537,119	441,710
ASIA AND OCEANIA				
Ceylon	7,931	4,500	5,000	4,500
Netherlands Indies	3,310	800	1,000	1,000
New Guinea	398	400	400	400
New Hebrides	3,916	3,360	3,100	3,000
Western Samoa	2,326	3,360	6,000	5,000
Total	17,881	12,420	15,500	13,900
Grand Total	1,578,939	1,354,965	1,423,719	1,347,330

[1] The cacao crop year in most countries extends from October 1 to September 30.

[2] Export data have been used for all countries, with the exception of Mexico, Cuba, and Colombia.

[3] Preliminary.

[4] Includes Sierra Leone, French Togoland, French Equatorial Africa Madagascar, and Angola.

[5] Includes El Salvador, Nicaragua, and Dominica. Compiled or estimated from official statistics of foreign governments and U. S. Foreign Service reports.

lack of so-called incentive goods had an adverse effect on the quantity of beans harvested. The African native is interested in the monetary return from his labor to the extent that he can use it in procuring calicoes, trinkets, and other consumer items. When there is a dearth of these goods, it is difficult to induce him to work. Saving money has little appeal for him; therefore increasing the price to natives will not necessarily lead to a corresponding increase in cacao production. In fact, it may bring the reverse, by reducing the amount of cacao that he needs to harvest and sell in order to obtain the money he needs to exchange for goods.

PRESENT STATUS OF INDUSTRY

British West Africa

Cacao production in British West Africa is centered in the Gold Coast and Nigeria, but it is also of some importance in Sierra Leone and the British mandated territories of Togoland and the Cameroons. The most striking feature of the production is its rapid expansion prior to 1939. In 1879, cacao was introduced into the Gold Coast from Fernando Po. In 1920, the Gold Coast exported 279 million pounds of the beans, compared with 51 million pounds in 1910. Exports during the quinquenium 1935-39 averaged 609 million pounds. Since then, production has decreased. The story in Nigeria is similar.

TABLE 2.- *Principal cacao-harvesting periods in producing countries.*

COUNTRY	HARVEST PERIODS	
	MAIN CROP	SECONDARY OR INTERMEDIATE CROP
BRAZIL	SEPTEMBER-JANUARY	MID APRIL-AUGUST
CEYLON	NOVEMBER-JANUARY	MAY-JULY
COSTA RICA	OCTOBER-JANUARY	MAY-JUNE
CUBA	NOVEMBER-JANUARY	APRIL-JUNE
COLOMBIA	DECEMBER-JANUARY	JULY-AUGUST
DOMINICAN REPUBLIC	MARCH-JUNE	OCTOBER-JANUARY
ECUADOR	FEBRUARY-JUNE	DECEMBER-JANUARY
FERNANDO PO	JULY-SEPTEMBER	(NO INTERMEDIATE CROP)
FRENCH CAMEROONS	AUGUST-JANUARY	MAY-JULY
GOLD COAST	OCTOBER-FEBRUARY	MAY-JUNE
GRENADA	OCTOBER-DECEMBER	APRIL-MAY
HAITI	OCTOBER-JANUARY	APRIL-JUNE
IVORY COAST	SEPTEMBER-DECEMBER	APRIL-JUNE
JAVA	APRIL-SEPTEMBER	NOVEMBER-DECEMBER
JAMAICA	SEPTEMBER-FEBRUARY	APRIL-JUNE
LIBERIA	SEPTEMBER-DECEMBER	MAY-JULY
MEXICO	APRIL-AUGUST	SEPTEMBER-MARCH
NICARAGUA	NOVEMBER-DECEMBER	(NO INTERMEDIATE CROP)
NIGERIA	OCTOBER-JANUARY	MAY-JUNE
SAN THOMÉ AND PRINCIPE	OCTOBER-DECEMBER	MARCH-MAY
TRINIDAD AND TOBAGO	DECEMBER-MAY	SEPTEMBER-OCTOBER
VENEZUELA	NOVEMBER-FEBRUARY	APRIL-JUNE

The general characteristics of the industry are described as follows:[1]

> The actual growers of cocoa in West Africa are African farmers working very small farms with the assistance of their families or hired help. Before cocoa was introduced into West Africa about half a century ago, the African farmer practiced a subsistence system of agriculture under which he and his family cleared a stretch of forest, grew their food thereon and then, as the soil was exhausted, moved on to a fresh clearing, leaving the former farm to relapse into forest. Under such a system there was no individual tenure of land. On the contrary, the land was (and still is over the greater part of the area in question) regarded as the property of the community. The growing of cocoa fitted easily into such a system and the crop was spontaneously adopted by many thousands of small cultivators. This changeover was made without any substantial alteration in the traditional frame-work of the tribal society to which the cultivators belonged; but it brought about a veritable social and economic revolution by transferring the cocoa farmer from a subsistence agriculture to dependence on a cash crop sold on an international market. Many of the resultant social problems are complex and have yet to be solved; but the change has certainly made it possible for Africans engaged in cocoa production to raise their standard of living.

The main problem in British West Africa is the control of diseases and insect pests which have reduced yields substantially in recent years. Swollen shoot,[2] black pod rot,[3] and capsid bugs (*Sahlbergella singularis* and *Distantiella theobroma*)[4] are commanding most attention. Capsid bugs are prevalent in both Nigeria and the Gold Coast. Swollen shoot is widespread in the Gold Coast, but it has been found in Nigeria only in the Ibadan Division of Oyo Province. It may never gain a strong hold owing to the prompt initiation of control measures. Black pod is quite serious in Nigeria, but the control of it is said to present no particular difficulties.

Although ravages of various diseases are the reason commonly given for the smaller cocoa crops in British West Africa, the effects of unfavorable weather during 3 crop years (1945-46 through 1947-48) should not be overlooked. Prolonged droughts reduced the number of pods formed and hindered proper development. In some areas, rains prevented harvesting of cacao maturing in late September and early October, and also accelerated the spread of black-pod disease.

Another factor in the declining output is the age of the trees. Surveys made in Nigeria indicate that the percentage of young trees is small in comparison with the old. In the Province of Oyo, which produces about 70 percent of Nigeria's cacao, 33

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[1] [Great Britain/Colonial Office. STATEMENT ON FUTURE MARKETING OF WEST AFRICAN COCOA. [Gt. Brit.] Colon. Off. Cmd. 6950. 8 pp. London. 1945.

[2] Swollen shoot is a virus complex which frequently kills trees within 2 years after infection occurs. The young shoots swell, and the leaves may become mottled before falling off. The virus has been found to be transmitted to the trees by mealy bugs (*Pseudococcus* sp. and *Ferrisia* sp.), the cacao Psyllid (*Mesohomotoma tessmanni*), and the cacao aphis (*Toxoptera aurantii*).

[3] Black pod rot is caused by the canker fungus (*Phytophthora palmivora*). The fungus attacks pods of any age and spreads rapidly, especially in wet weather. The infected pods turn black and are rendered unfit for use.

[4] The capsid bugs inject a toxic substance into the tree when they puncture its tissues. This poison destroys the leaves and twigs and may kill the tree in 2 or 3 years if the attacks are heavy.

percent of the trees are over 21 years of age, 53 percent from 10 to 20 years, and 14 percent under 10 years. In Ondu Province, the second largest producing area, approximately the same age distribution exists. Although no statistical data are available on the ages of the trees in the Gold Coast, it is known that plantings dropped off during the period of low prices in the 1930's and have not been extensive enough to offset the decrease in yield due to the inroads of disease.

The Gold Coast

Despite recent declines in production, the Gold Coast is still by far the world's largest producer, supplying about 37 percent of all cacao beans entering world trade. Approximately two-thirds of the population devote all, or part, of their time to growing cacao. Over a million acres are planted in cacao trees. Ordinary cacao is produced, commercially known as Accra. According to value, cacao accounts for 95 percent of the Gold Coast's agricultural exports and 60 percent of total exports.

In the years immediately preceding World War II, about 66 percent of the Gold Coast's cacao was exported to Europe, 28 percent to North America, and the remaining 6 percent principally to Africa and Oceania. The United Kingdom imported the largest quantities, followed by the United States, Germany, and the Netherlands. In 1947, 45 percent of the exports were destined to North America, 39 percent to Europe, and the remainder to Africa and Oceania. The United States took the largest quantity, or 42 percent of total exports. The United Kingdom was second, taking 27 percent. (See table 4.)

Nigeria

Nigeria is the third largest cacao-producing country, supplying about 14 percent of world exports. About 525,000 acres are devoted to cacao in Nigeria, and the number of trees is estimated at 244 million. Nigerian farmers grow more food for home consumption than do their neighbors on the Gold Coast. Although cacao is an important cash crop, the Nigerian is frequently more concerned about his yams that the cacao trees. This attitude, especially during the war years, led to more-than-usual neglect of the cacao trees. Poor cultural practices promoted the spread of disease, particularly black pod, and largely account for the drop in production since 1939. A vigorous rehabilitation program has been inaugurated, and, if other conditions remain favorable, Nigerian production might be restored to the prewar level in a reasonable length of time.

In prewar years, the bulk of Nigeria's cacao was marketed in the United States, United Kingdom, the Netherlands, and Germany. The trade pattern in 1947 remained the same, except that no cacao was exported to Germany. The United States was the destination of 47 percent of the cacao shipped in 1947, and the United Kingdom 38 percent. (See table 5.)

British Cameroons

After World War I, the German colony of the Cameroons was divided into the mandated territories of the British and French Cameroons. During the period of German control, cacao was introduced and developed mainly as a plantation crop. During 1924 and 1925, the former German owners were allowed to buy back their cacao plantations in the British Cameroons. The Germans found cacao growing less profitable than formerly, and there was a gradual shift to other crops so that when the British again took over

TABLE 3.- *Average yearly prices per pound of cacao beans and 5-year moving averages for Accra and Arriba, spot, f.o.b., New York, 1913-47, and average monthly prices, January-April 1948.*

YEAR	ACCRA, FAIR FERMENTED		ARRIBA, RANGE OF SEASON, AND RED SUMMER	
	YEARLY AVERAGE	5-YR. MOVING AVERAGE	YEARLY AVERAGE	5-YR. MOVING AVERAGE
	Cents per lb.	*Cents per lb.*	*Cents per lb.*	*Cents per lb.*
1913	13.9	-	15.3	-
1914	12.4	-	13.0	-
1915	16.7	13.7	17.6	15.2
1916	14.2	13.5	17.0	14.8
1917	11.2	14.7	12.9	16.7
1918	12.9	14.1	13.6	17.3
1919	18.6	12.8	22.4	15.9
1920	13.4	12.4	20.4	15.6
1921	7.8	11.3	10.2	15.2
1922	9.2	9.1	11.6	13.8
1923	7.6	8.3	11.5	13.1
1924	7.6	9.1	15.2	14.7
1925	9.5	10.4	17.1	16.3
1926	11.5	11.5	18.1	17.0
1927	15.8	12.0	19.6	17.1
1928	12.9	11.7	15.2	16.6
1929	10.4	10.5	15.5	15.4
1930	8.1	8.2	14.6	13.3
1931	5.2	6.5	12.0	12.1
1932	4.4	5.5	9.3	10.9
1933	4.4	4.8	9.2	9.5
1934	5.2	5.2	9.2	9.0
1935	5.0	5.9	7.8	9.3
1936	6.9	6.1	9.3	9.2
1937	8.4	6.1	10.9	9.5
1938	5.2	6.1	8.8	10.1
1939	4.8	6.2	10.6	10.1
1940	5.1	6.3	10.9	10.1
1941	7.6	7.1	9.2	10.5
1942	9.0	7.9	11.0	10.8
1943	8.9	8.7	10.9	11.0
1944	8.9	9.4	12.0	12.9
1945	8.9	-	12.0	-
1946	11.5	-	18.7	-
1947	34.8	-	38.8	-
1948: MONTHLY AVERAGES				
January	43.6	-	44.7	-
February	43.6	-	43.5	-
March	39.4	-	(1)	-
April	35.4	-	(1)	-

[1] Not available.

Arriba prices from U.S. Bureau of Labor Statistics 1913 to 1945; thereafter trade sources. Accra prices, trade sources prior to 1926; thereafter U.S. Bureau of Labor Statistics.

TABLE 4.- *Exports of cacao beans from the Gold Coast, by country of destination, averages 1935-39 and 1940-44, annual 1945-47*

COUNTRY OR CONTINENT	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946[1]	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
THE AMERICAS					
Canada	5,293	17,708	23,533	34,160	11,390
United States	166,363	179,610	248,447	200,879	165,388
Newfoundland	125	-	-	-	-
Total	171,781	197,318	271,980	235,039	176,778
EUROPE					
Belgium	5,580	604	23,032	10,080	8,904
Czechoslovakia	2,345	-	-	-	2,072
Denmark	5,208	170	-	2,688	2,621
France	1,151	-	-	-	-
Germany	109,278	-	-	-	-
Greece	482	318	-	1,008	-
Italy	7,995	64	-	-	-
Netherlands	57,891	224	13,597	36,736	11,738
Norway	5,098	809	4,720	661	2,979
Poland and Danzig	4,050	-	-	3,360	-
Sweden	6,897	1,119	2,565	7,168	3,741
Switzerland	363	7,769	4,420	-	3,550
United Kingdom	196,643	182,927	114,043	140,439	109,928
USSR	34	7,135	-	24,864	10,304
Other	837	72	-	217	-
Total	403,852	201,204	162,377	227,221	155,837
ASIA	155	235	-	-	-
AFRICA	15,700	18,084	35,392	40,327	39,865
OCEANIA	17,875	11,235	11,249	26,761	22,601
Not specified	-	629	3,360	-	1,707
Grand Total	609,363	428,705	484,358	529,348	396,789

[1] Preliminary

Source: GOLD COAST TRADE REPORTS and United States Foreign Service reports.

the plantations in 1939 cacao production was considerably less than it was in 1925, or about 3.5 million pounds annually. On the other hand, production of native-grown cacao had increased from 1925 to 1939, because the British had encouraged the natives to plant cacao. During World War II, however, production of both native and plantation cacao declined. Food crops largely displaced cacao on the plantations, and the shortage of incentive goods caused the natives to take little interest in the crop. During the crop year 1937-38, over 11 million pounds of native-grown cacao from the British Cameroons were graded in Nigeria, compared with about 5 million pounds during 1945-46. Total cacao production in the British Cameroons during the 1947-48 season is estimated at 5.5 million pounds. Most of the cacao produced in the British Cameroons is exported from Nigeria and is included in the Nigerian trade statistics.

Sierra Leone

Cacao is of minor importance in Sierra Leone. All the cacao is grown by native farmers on small holdings of 1 to 3 acres. It is usually of low quality, on account of insufficient fermentation and the high percentage of hard flat beans. Frequently unripe pods are harvested to prevent their destruction by monkeys. Such pods yield immature flat beans.

There are about 6.5 million cacao trees in Sierra Leone, occupying 10,000 acres. About 1.3 million pounds of beans were produced in 1946, compared with a 1935-39 average of about 758,000 pounds. Production is expected to reach 3 million pounds by 1950. Sierra Leone cacao is marketed through the Gold Coast Cocoa Marketing Board.

British Togoland

After World War I, the German colony of Togoland was divided between France and the United Kingdom in accordance with the Franco-British declaration of July 10, 1919. In British Mandated Togoland cacao growing, established originally under German control, was an important industry at the outbreak of World War II. In 1938, the last year for which figures are available, approximately 37 million pounds of cacao beans were produced. Data on British Togoland are difficult to obtain, because the bulk of the output is exported from the Gold Coast and so loses its identity. Smaller quantities are exported from French Togoland as French Togoland cacao.

French Africa

The Ivory Coast

Although cacao was introduced into the Ivory Coast about 1870, it did not become important until about 1925, when 14 million pounds were produced. The output of cacao increased steadily until 1939, when it reached a peak of 123 million pounds. During World War II, a sharp drop in production occurred, caused by labor shortages, market uncertainties, shipping difficulties, and destruction by various diseases. Swollen shoot is quite prevalent in areas near the Gold Coast, but it has not caused great damage as yet. Steps are being taken, however, to eliminate the diseased trees. Production during the 1947-48 season is estimated at 72 million pounds.

The area under cacao in the Ivory Coast is estimated at 250,000 acres, of which 70 percent is in trees over 20 years of age, 27 percent in younger bearing trees, and 3 percent in trees that have not yet reached bearing age. The cacao industry in the Ivory Coast, as in the Gold Coast, is almost entirely a peasant enterprise. Only

About 20,000 acres are now in European-owned plantations, many owners having switched to coffee in the late 1930's on account of low prices for cacao beans. In an effort to restore production to the prewar average of 110 million pounds, the Ivory Coast Government plans to have about 12,000 acres of cacao planted annually for the next 12 to 15 years. Although some of these plantings will be on land hitherto not used for cacao, the greater part will be on old cacao land.

Traditionally, France is the principal market for Ivory Coast cacao. In prewar years, large quantities also were exported to the United States and the Netherlands. In recent years, exports to the United States have been far below the prewar level, owing to smaller crops and the allocation program of the International Emergency Food Committee. (See table 6.)

French Cameroons

Although the Germans introduced cacao culture into the French Cameroons some years before World War 1, the industry did not expand greatly until the 1930's. In 1930, 24 million pounds of cacao were exported, and in 1938 almost three times that amount, or 68 million pounds. The 1947-48 crop is estimated at 92 million pounds, showing that the production trend is upward. The industry is carried on almost entirely by natives. The number of cacao trees is placed at 125.7 million, most of which are young, falling in the 10- to 20-year age group. Diseases and pests are present to some extent in all the cacao districts, but they are not, as yet, as serious a menace as in the British colonies. No swollen shoot has been found.

The youth of the Cameroons industry largely accounts for its relatively favorable position today. Also, neglect of the cacao trees during the war years was not so widespread as in the other French colonies, because the British through appropriate agencies purchased a large part of the 1939-40 crop and the entire output thereafter until January 1945.

TABLE 5.- *Exports of cacao beans from Nigeria, by country of destination, averages 1935-39 and 1940-44, annual 1945-47*

COUNTRY	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946	1947
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Canada	-	4,835	13,317	23,462	8,595
United States	75,227	67,537	99,357	106,662	116,919
France	653	4	-	-	-
Germany	36,234	-	-	-	-
Netherlands	41,652	3,167	2,274	11,247	23,632
United Kingdom	58,787	98,566	54,878	81,814	93,612
Union of S. Africa	50	10,358	2,659	1,232	2,531
Other	3,715	61	4	-	2,845
Total	216,318	184,528	172,489	224,417	248,134

[1] Preliminary

Source: NIGERIA TRADE REPORTS and United States Foreign Service reports.

French Togoland

French Togoland produces about 6 million pounds of cacao beans annually, but exports from the territory are frequently much larger, because they include cacao from British Togoland and the Gold Coast. No appreciable expansion of cacao cultivation is expected, because the amount of suitable land is limited and the natives are showing little interest in the crop.[5] About 16,000 acres are now in cacao.

French Equatorial Africa

About 7,700 acres are devoted to cacao in French Equatorial Africa, and the output is about 3 million pounds annually. The industry, which is of considerable importance in the economy of the colony, is carried on almost entirely by natives. The Government in attempting to stimulate new plantings has decreed that taxes on idle-land concessions will be doubled after 1948, but land planted to cacao will be tax free for 5 years. However, no great increase in production appears possible until adequate transportation can be provided. Roads are few and poor. Most of the cacao reaches market by head porterage. It is exported through the French Cameroons ports of Douala and Kribi. Because of the Customs Union with the Cameroons, the exports are included with those of the Cameroons.

Madagascar

A little over 2,000 acres are reported under cacao in Madagascar, and about 800,000 pounds of cacao are produced annually. Exports are considerably less than this amount, because some cacao is consumed locally and some is exported in the form of chocolate. Production declined during the war years, and, while it may regain the prewar level, no further significant expansion seems likely.

Other African Producing Areas

Spanish Guinea

Cacao production of Fernando Po, politically a part of Spanish Guinea, is probably the oldest in Africa. Records indicate that cacao was brought to the island from Latin America in the late sixteenth or early seventeenth century. It happened that the variety introduced was a low-quality, high-yielding Forastero type. This is significant, because Fernando Po cacao was the parent from which the large production of Africa came. Despite its early start, cacao growing on the island did not become important until about 1910. Since then there has been a gradual increase in production, not interrupted even during World War II. (See table 1.) In 1947, about 36 million pounds of cacao beans were exported, the largest quantity on record.

Most of the cacao in Fernando Po is plantation-grown, and it would be of excellent quality if properly fermented and cured. Almost the entire output goes to Spain, where preferential duties favor its importation. The Spaniards prefer a lightly fermented bean, which accounts for the underfermentation. Frequent wet weather during the harvesting period makes artificial drying necessary.

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[5] SCHWARZ, LEONARD J. COCOA IN FRENCH TOGOLAND. Report to American Cocoa Research Institute. 6 pp. [Mimeographed] [n.d.]

TABLE 6.- *Exports of cacao beans from the Ivory Coast and Dahomey, by country of destination, averages 1935-39 and 1940-44, annual 1945-47.*

COUNTRY OR CONTINENT	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
United States	32,817	1,669	10,655	25,562	7,460
Belgium	498	-	-	-	2,105
France	56,654	46,052	40,986	26,446	40,316
Germany	4,445	-	-	-	-
Netherlands	8,902	-	-	-	2,216
Sweden	4	-	-	-	3,106
Switzerland	-	485	-	1,102	2,934
United Kingdom	3,560	4,959	7,758	8,468	-
Other Europe	1,158	-	-	-	1,080
Other Africa	207	5,147	-	984	1,936
Other	1,698	1	-	-	-
Total	109,943	58,313	59,399	62,562	61,153

[1] 11 months only.
Source: United States Department of Commerce and United States Foreign Service reports.

Cacao was introduced into the Río Muni region of Spanish Guinea about 1920. So far, production is small, averaging about 2 million pounds a year. Reports have indicated that possibilities for expansion are good.

San Thome and Principe

Cacao has been grown in the Portuguese possessions of San Thome and Principe since the early 1800's. Production reached a peak in 1910 with a crop of 83 million pounds, but it has declined, mainly on account of the ravages of thrips,[6] until now it averages about 15 million pounds annually.

Angola

Angola has a small cacao production, centered in the Cabinda area. Exports during 1935-39 averaged 679,000 pounds, compared with 399,000 pounds during 1940-44 and 784,000 pounds in 1947. The bulk of the exports are destined to Portugal. Possibilities of increasing production are limited, because most of the country is too dry for successful cacao cultivation.

Belgian Congo

Cacao has been grown mostly as a plantation crop in the Belgian Congo since about 1886. About 2.5 million pounds of cacao are produced annually. Approximately 19,000 acres are devoted to the crop, of which about one-third are in trees not yet

[6] The insect (*Selenothrips rubrocinctus*) usually attacks the under side of the cacao leaves, sucking the juice. As a result, brown spots appear on the leaves, and they later drop off. In cases of severe attacks, the tree is completely defoliated.

of bearing age so that some increase in production may be expected when the young trees mature. Although there are large areas in the Congo believed suitable for cacao, labor shortages and inadequate transportation facilities may postpone their development indefinitely.

Liberia

Although cacao has been grown in Liberia as a minor crop for a number of years, it may become a major enterprise in the next decade, if efforts being made to increase production meet with anticipated success. There are now about 2.5 million cacao trees in Liberia, of which 1 million are less than 1 year of age. It is estimated that there are 250,000 trees 6 to 10 years old, 500,000 from 11 to 20 years, and 750,000 over 21 years. About 3,000 acres are now devoted to cacao, but the long-range development program is being carried out jointly by the Liberia Company and the Liberian Government, assisted by the United States Economic Mission. Prewar (1935-39) cacao production in Liberia amounted to about 11 million pounds annually. In 1947, only 3.3 million pounds were produced. Future crops are expected to show an upward trend.

South America

Brazil

Brazil ranks second among the cacao-growing countries of the world, being exceeded only by the Gold Coast. The State of Bahia, where cacao was introduced about 200 years ago, produced 96 percent or more of Brazil's cacao. Most of the remainder comes from Pará, Espírito Santo, and Amazonas. Insignificant quantities are produced in the States of Ceará, Rio de Janeiro, Minas Gerais, and Pernambuco. Despite its early introduction, cacao growing did not make much progress until about 1900. By 1910, production had reached about 64 million pounds. During the next decade it almost doubled and in 1930 reached about 147 million pounds. The 1937-38 crop of approximately 299 million pounds[7] was the largest up to that time. During World War II, production decreased, owing mainly to neglect of the plantations. The 1946-47 crop, however, reached the record high of 312 million pounds. As a result of unfavorable weather, the 1947-48 crop is expected to be much less, or about 218 million pounds.

About 591,000 acres are planted to cacao in Brazil. The number of trees is estimated at 200 million, most of which are Forasteros. The beans are commercially known as Bahia cacao. Large plantations are the general rule. According to data compiled by the Bahia Cocoa Institute, about 1,500 large-scale farmers produce nearly 60 percent of the cacao.

Soil and climatic conditions in the State of Bahia are most favorable to cacao cultivation. In Ilheus, the most important cacao district, the land is hilly. Mineral-bearing rocks abound, the weathering of which constitutes a natural method of fertilization. After 80 years of cacao growing, some soils show only negligible deterioration. Other very productive areas in Bahia lie along the Pardo, Jequitinhonha, and Mucury Rivers, where periodic inundations keep the soil fertile.

It appears that cacao production in the State of Bahia could be materially increased. Additional suitable land is available, especially along the rivers in southern Bahia; the labor supply is sufficient; and no highly destructive diseases are prevalent.

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[7] Production for State of Bahia only. Ordinarily production data for other producing States are not available.

Espirito Santo is the only other State in Brazil where substantial increases in cacao production seem possible. In the Rio Doce valley there are vast areas reported by Schwarz[8] and others to be suitable for cacao. Their development appears remote, however, since construction of roads and the establishment of malaria control are prerequisites to any significant expansion.

Consumption of raw cacao in Brazil was insignificant until about 1928, when the first factory was built for extracting cocoa butter on a commercial scale. For the next 11 years progress toward industrialization of cacao was slow, about 6.6 million pounds of beans being processed in 1939. The wartime demand for cacao cake, from which theobromine and caffeine are obtained, gave great impetus to the industry. In 1943, about 32.1 million pounds of beans were processed. The quantity dropped to about 21 million pounds in 1947, primarily because of high prices for cacao beans.

For a number of years, the United States has been the principal market for Brazilian cacao beans. In the prewar period (1935-39), 71 percent of Brazil's cacao exports were to the United States; 23 percent to Europe, chiefly Germany; and 6 percent to Asia, Africa, and Oceania. During the latter part of World War II, nearly all of Brazil's cacao was taken by the United States, inasmuch as the European market was cut off and shipments from Africa were curtailed. After the war, Europe re-entered the market. In 1947, about 20 percent of the cacao beans exported from Brazil were destined to European countries, mainly the Netherlands. (See table 7.)

Ecuador

Cacao has been grown in Ecuador for centuries. Records show exports as far back as the year 1740, when over 3 million pounds were sent to Spain. Prior to 1910, Ecuador ranked first among cacao-producing countries, both as to quantity and quality. Exports reached the peak total of 104 million pounds in 1914. Since then there has been considerable fluctuation, but the general trend has been downward, with exports amounting to 43 million pounds in 1947. Low prices, poor farm management, and diseases - witches'-broom, pod rot (*Monilia*), and others - largely account for the decline. Today 90 percent of the trees in some areas are heavily diseased, and this in part causes the low yield per tree, which on some plantations averages only about one-quarter of a pound. Even though cacao exports are smaller than formerly, in 1947, on the basis of value, cacao ranked first among Ecuador's export commodities.

In Ecuador, most of the cacao is grown on relatively large plantations. About 300,000 acres are devoted to the crop, and the number of trees is estimated at 75 million. The principal producing areas are in the Provinces of Los Rios, Guayas, El Oro, and Manabi, from which come the grades of cacao known commercially as Arriba, Balao, Machala, and Bahia, respectively. About 65 percent of the exports consist of Arriba, a well-known flavor grade. During 1946-47 about 37 million pounds of cacao were produced. Domestic consumption amounts to about 1.7 million pounds annually, which leaves the bulk of the output available for export.

Prior to World War II, about two-thirds of Ecuador's cacao beans were exported to European countries, principally Germany. During and since the war, the United States has been the principal market. In 1947, 73 percent of the cacao exported was destined to the United States, 12 percent to the other Western Hemisphere countries, 14 percent to Europe, and 1 percent to other areas. (See table 8.)

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[8] SCHWARZ, LEONARD J. COCOA IN BRAZIL. Reports to American Cocoa Research Institute. /Mimeographed./

Venezuela

Cacao production has declined in Venezuela as in Ecuador. Cacao exports reached a peak of 51 million pounds in 1925, compared with a 1935-39 average of 37 million pounds and a 1947 total of 23 million pounds. Cacao beans, for many years the leading export item in terms of value, now account for less than 2 percent of the total export revenue. The drop is due not only to smaller quantities exported but also to the mounting importance of petroleum and its products in the export trade. As cacao growers have been unable to pay attractive wages, workers have migrated to the oil fields. The resulting shortage of labor on the cacao plantations has been an important factor in limiting production.

Estimates indicate that there are about 60 million cacao trees in Venezuela, covering about 130,000 acres. Most of the trees are in the age group of 40-60 years.

TABLE 7.- *Exports of cacao beans from Brazil, by country of destination, averages 1935-39 and 1940-44. annual 1945-47.*

COUNTRY OR CONTINENT	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
THE AMERICAS					
Canada	883	-	-	2,205	4,409
United States	187,586	195,500	137,200	168,334	143,751
Argentina	10,584	14,774	42,407	18,887	16,870
Chile	93	1,363	1,607	1,971	772
Colombia	2,385	720	132	750	1,190
Uruguay	1,191	1,737	1,931	2,919	893
Other	3	102	24	35	3,055
Total	202,725	214,196	183,301	195,101	170,940
EUROPE					
Belgium - Lux.	2,203	79	-	1,422	1,830
Denmark	2,235	20	-	4,409	2,028
Eire	-	314	-	1,400	2,240
Finland	-	1,041	-	-	44
Germany	27,491	2,866	-	-	-
Italy	9,263	3,158	-	14,070	2,694
Netherlands	9,068	1,449	-	58,091	18,847
Norway	1,748	251	-	3,307	2,205
Sweden	4,565	6,026	-	4,784	1,830
Switzerland	303	1,515	637	1,056	3,490
United Kingdom	859	192	-	112	251
USSR	-	1,411	-	-	2,247
Other	2,897	151	-	2,887	3,646
Total	60,632	18,473	637	91,538	41,352
ASIA	244	250	-	754	2,346
AFRICA	197	135	-	-	3,002
OCEANIA	182	55	-	220	710
Grand Total	263,980	233,109	183,938	287,613	218,350

[1] Preliminary.

Source: COMERCIO EXTERIOR DO BRAZIL and United States Foreign Service reports.

TABLE 8.- *Exports of cacao beans from Ecuador, by country of destination, averages 1935-39 and 1940-44, annual 1945-47.*

COUNTRY OR CONTINENT	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946[1]	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
THE AMERICAS					
Mexico	-	639	613	-	-
United States	13,594	27,026	25,165	17,365	31,677
Argentina	256	179	320	132	361
Bolivia	71	209	194	134	114
Chile	201	582	816	722	463
Colombia	-	886	7,154	7,335	4,284
Peru	196	778	1,080	446	172
Other	41	131	137	229	-
Total	14,359	30,430	35,479	26,363	37,071
EUROPE					
Belgium	2,039	117	-	1,143	2,936
Denmark	946	-	18	668	-
France	1,585	9	-	-	-
Germany	16,715	7	-	-	-
Italy	842	245	-	281	1,060
Netherlands	2,687	11	-	2,952	1,093
Sweden	487	51	776	1,368	224
Switzerland	13	346	822	1,903	602
United Kingdom	1,506	180	-	-	-
Other	812	6	2	639	22
Total	27,632	972	1,618	8,954	5,937
ASIA	84	-	-	200	68
OCEANIA	223	40	-	-	7
Other	74	-	-	-	241
Grand Total	42,372	31,442	37,097	35,517	43,324

[1] Preliminary.
Source: Official statistics of Ecuador and United States Foreign Service reports.

The industry is essentially of a plantation type. Schwarz[9] states that about 35 percent of the cacao comes from 125- to 875-acre farms and 40 percent from 37- to 125-acre farms. The cacao-growing areas lie near the coast and along the Orinoco River. About 50 percent of the crop is produced in the Barlovento District of the State of Miranda and about 20 percent in the Territorio Delta Amacuro, at the mouth of the Orinoco River. Most of the remainder comes from the States of Sucre, Zulia (Maracaibo Basin), Merida, Aragua, Carabobo, Yaracuy, and the Federal District.

Venezuelan cacao is generally not so high in quality as it was formerly, owing to the introduction from Trinidad of hybrid trees, called Trinitarios. The Trinitarios are crosses between Criollo stock and Forastero. They predominate now, although some plantings of pure Criollo remain. In general, the flavor grades are produced in western Venezuela, and the ordinary grades in eastern Venezuela, principally in the delta of the Orinoco and in the State of Sucre.

Since 1936, the Venezuelan Government has sought to aid the cacao industry

[9] SCHWARZ, LEONARD J. COCOA IN VENEZUELA. Report to American Cocoa Research Institute. 13 pp. [Mimeographed.] Sept. 1947.

through the granting of a subsidy to exporters. Commencing with 1941, this aid has been rendered through the device of the "cacao dollar." The Central Bank of Venezuela purchases the dollars obtained from the export of cacao beans at a rate of exchange higher than the commercial rate. In 1941, the rate for the cacao dollar was bolivares 3.75 and the commercial rate, bolivares 3.33. Later the rate for the cacao dollar was increased to bolivares 4.25. A joint Resolution of the Ministries of Finance and Agriculture, published May 26,1948, provides for a further change. The rate of exchange for the cacao dollar was left at bolivares 4.25, but, when the world selling price for cacao beans in United States dollars exceeds $29.00 per 46 kilograms (101.4 pounds), exporters are required to convert part of the dollars received at the regular commercial exchange rate of bolivares 3.33. The percentage of returns that must be converted at the commercial rate increases with higher prices for cacao beans. When the world selling price is $39 or more per 46 kilograms, all the returns must be converted at the commercial rate.

Domestic consumption of cacao in Venezuela is small, probably not more than 5 million pounds a year. Some increase in consumption may have occurred during the war years, as a result of higher wages and more widespread employment. In 1944, the country began to export semimanufactured chocolate and chocolate candy. Shortage of sugar during the war years hampered this development, but under favorable circumstances cacao processing will continue.

During the decade before World War II, exports of cacao beans from Venezuela went in about equal amounts to European countries and the United States, if the fact is taken into consideration that most of the cacao beans exported to Trinidad and Tobago were reexported to the United States. In recent years, cacao-bean exports have been principally to the United States. In 1947, of total cacao-bean exports, about 85 percent were destined to the United States and 14 percent to European countries. (See table 9.)

Colombia

Colombia produces from 20 to 25 million pounds of cacao beans annually, none of which are exported, because domestic production falls short of consumption requirements by about 12 million pounds. Efforts are being made to increase production at least to the point where it will be sufficient for domestic needs.

Surinam (Dutch Guiana)

Practically no cacao is produced in Surinam, although formerly it was one of the Colony's most important crops. Exports of cacao beans reached a peak of 9.8 million pounds in 1895, after which they declined rapidly on account of witches'-broom disease. In 1925, only 1.8 million pounds were exported. In 1925-26 an unusually severe drought killed many of the trees. As a result of this drought and inability to cope with witches'-broom disease, the growers abandoned cacao in favor of coffee and other crops.

Currently an effort is being made to reintroduce cacao into Surinam. The Surinam Department of Agriculture has obtained from Trinidad high-yielding stock that is resistant to witches'-broom and is prepared to furnish up to 200,000 young trees annually to growers for planting under specified conditions. Since demand for such planting material exceeds the supply, the indications are that the plan to reintroduce cacao is meeting with considerable success.

TABLE 9.- *Exports of cacao beans from Venezuela, by country of destination, averages 1935-39 and 1940-44, annual 1945-47.*

COUNTRY OR CONTINENT	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
THE AMERICAS					
United States	11,205	21,471	21,199	22,332	19,550
Trinidad and Tobago	7,057	7,261	3,929	-	-
Colombia	21	457	1,664	-	-
Others	112	458	903	110	62
Total	18,395	29,647	27,695	22,442	19,612
EUROPE					
Belgium	1,438	198	-	2,761	633
France	3,328	8	-	-	-
Germany	9,716	-	-	-	-
Italy	371	219	-	19	1,712
Netherlands	1,812	213	-	1,716	723
Switzerland	-	180	-	177	-
United Kingdom	1,252	148	-	1,299	110
Other	361	224	-	396	110
Total	18,278	1,190	-	6,368	3,288
ASIA	257	124	-	-	-
All Others	4	471	-	-	-
Grand Total	36,934	31,432	27,695	28,810	22,900

[1] Preliminary.

Source: ESTADISTICA MERCANTIL Y MARITIMA and Foreign Service reports.

Peru

Although cacao has been grown in Peru for many years, the quantity produced is not sufficient to meet domestic requirements. No recent production figures are available. In 1929, the number of cacao trees was estimated at 4 million on 27,000 acres. About 4 million pounds of cacao were produced in that year. The principal producing areas are in the Departments of Cajamarca and Cuzco. Witches'-broom disease is prevalent and may account for the fact that cacao growing has never become important in the country.

Bolivia

Cacao is grown in Bolivia, but production is not large enough to supply the local market. Small quantities of beans and cacao products are imported. The lack of transportation facilities is said to be the chief factor limiting domestic production.

Central America and the Caribbean

Costa Rica

There are about 40,000 acres planted to cacao in Costa Rica, mostly situated along the eastern coastal plain in Limon Province. Nearly half the acreage belongs

to the United Fruit Company. The remainder is in the hands of small farmers who either own or rent the land. The cacao produced is a "near fine" grade, commanding a price above the ordinary cacaos but not so high as that of the fine cacaos of Ecuador, Venezuela, and the West Indies. About 80 percent of the production is exported, and the remainder consumed locally. Normally, cacao ranks third as an export crop and accounts for about 10 percent, by value, of total exports.

Cacao exports reached a high point of 16 million pounds in 1930. In 1945, only 2.9 million pounds were exported, because torrential rains destroyed a large part of the 1944-45 crop. Recent crops have been much larger. Exports in 1947 totaled 10.5 million pounds, which amount compares favorably with the 1935-39 average of 14.3 million pounds. Aside from the physical damage to blossoms and pods inflicted by heavy rains, the decrease in production has resulted from the ravages of pod rot (*Phytophthora*). Experiment are now in progress to determine the most effective method of combatting this scourge. As a result of this work, some increase in Costa Rican production may be expected, but a rapid return to the prewar level appears unlikely.

Before the war, the United States and Germany were the principal markets for Costa Rican cacao. No cacao beans were exported to the United States in 1945 and 1946, since other countries were paying more than United States ceiling prices. Following the removal of ceiling prices, the United States resumed purchases of Costa Rican cacao, and, in 1947, 35 percent of total cacao exports were destined to the United States. During the same year, Colombia took 31 percent; European countries, principally the Netherlands, 17 percent; and other countries 17 percent. (See table 10.)

Mexico

Although cacao is indigenous to Mexico and was grown there years before the Spanish conquest, the industry has never been important in modern times. Production has increased greatly in the past 10 years, however, and in 1947, for the first time since 1925, significant quantities of cacao beans were exported. The shipments were to the United States and totaled about 9 million pounds. An unusually large crop in 1947 of about 15 million pounds made these exports possible. Ordinarily Mexico imports cacao to make up for the difference between domestic output and consumption requirements. Prospects are good for Mexico to continue to have an exportable supply of cacao beans. The acreage devoted to cacao has increased fourfold since 1933, or from about 12,000 to 48,000 acres.

Schwarz[10] presents data showing that, in 1945, 43 percent of the 13.8 million trees in Chiapas and Tabasco, the principal producing areas, were pure Criollo and 57 percent were Criollo hybrids and pure Forasteros. Most of the plantings in recent years have been of Forasteros, which would indicate gradual deterioration in the excellent quality of Mexican cacao as the characteristics of this type become dominant.

Republic of Panama

Most of Panama's cacao is grown by the United Fruit Company in the vicinity of Almirante. About 22,000 acres are planted to cacao, and the trees number about 6.5 million, most of which are more than 21 years old. There are no main harvesting periods, since the cacao is picked throughout the year at intervals of 3 to 5 weeks. This means that labor must be available continually and that ordinarily there is no peak export season. Unfortunately there is a shortage of labor in cacao areas, owing to the migration of workers to the Canal Zone, where wages are higher.

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[10] SCHWARZ, LEONARD J. CACAO IN MEXICO. 8 pp. [Mimeographed.]

Cacao did not become important in Panama until disease ruined many banana plantations in the late 1920's, with the result that the United Fruit Company turned to cacao. Trees planted during that time reached full bearing from 1935 to 1939, when production reached its peak and exports averaged 10 million pounds annually. Exports averaged 6 million pounds annually during 1940-44 but dropped to a little over a million pounds in 1945, the lowest in years. The decrease is attributed to labor shortages and the emphasis placed on the growing of abaca and other crops during the war years. In 1947, exports climbed to 6.5 million pounds.

Other Central American Countries

Small quantities of cacao are produced in various other Central American countries, of which Nicaragua, El Salvador, and Guatemala are most important. About 800,000 pounds are produced annually on an average in Nicaragua. This country's 1947 exports amounted to 598,000 pounds, or less than the prewar average of 792,000 pounds. El Salvador produces about 200,000 pounds annually, and Guatemala 1.5 million pounds, each country consuming practically all its production.

TABLE 10.- *Exports of cacao beans from Costa Rica, by country of destination, averages 1935-39 and 1940-44, annual 1945-47.*

COUNTRY OR CONTINENT	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
THE AMERICAS					
El Salvador	15	-	-	-	-
Mexico	25	2,276	116	1,260	-
Panama	565	-	-	-	-
Panama Canal Zone	-	19	-	-	-
United States	5,196	4,677	-	-	3,673
Canada	-	-	-	136	62
Argentina	38	55	-	170	122
Chile	420	316	62	253	658
Colombia	1,992	3,408	2,584	4,672	3,307
Peru	380	419	119	201	224
Uruguay	5	22	-	131	72
Total	8,636	11,192	2,881	6,823	8,118
EUROPE					
Belgium	320	62	-	-	185
France	344	-	-	-	-
Germany	3,946	-	-	-	-
Italy	169	56	-	-16	258
Netherlands	218	37	-	1,488	1,168
United Kingdom	344	3	-	-	-
Switzerland	-	-	-	-	248
Other	30	7	-	-	-
Total	5,371	165	-	1,504	1,859
ASIA	348	59	-	423	575
Grand Total	14,355	11,416	2,881	8,750	10,552

[1] Preliminary.

Source: DIRECCION GENERAL DE ESTADISTICA and United States Foreign Service report.

Cuba

Cuba's cacao production of 6 to 7 million pounds annually is about equal to domestic consumption requirements. Most of the cacao is produced in the mountainous sections of Oriente Province at the eastern end of the island. The crop was important until the beginning of World War I, when attention was directed to the growing of sugarcane. In 1925, cacao culture was revived to some extent, but it has never regained its former position.

The Dominican Republic

The Dominican Republic ranks sixth among cacao-producing countries and is second only to Brazil in the Western Hemisphere. In contrast to the situation in most countries, output in the Republic has been above the prewar (1935-39) average for several seasons. The 1946-47 harvest yielded 69.5 million pounds. The cacao is of ordinary grade, known commercially as Sanchez.

The Dominican Commission for the Defense of Coffee and Cacao estimates the number of cacao trees in the Dominican Republic at 60 million and the cacao acreage at 185,000 acres. Preliminary investigations indicate that 2 percent of the cacao acreage is in trees of less than 5 years of age; 30 percent, in trees 5 to 25 years old; 50 percent, 25 to 50 years, and 18 percent, in trees of over 50 years of age. During 1947, new plantings were made on 3,320 acres, compared with 2,370 acres in 1946. About 79,000 trees were cut down in 1947 and replaced with new plantings.

The industry is subjected to a considerable amount of Government regulation. It is unlawful to cut down cacao trees without approval of the Dominican Department of Agriculture, Livestock and Colonization, and all trees destroyed must be replaced. The preparation and export of cacao are under the supervision of the Commission for the Defense of Coffee and Cacao. The Commission also determines weekly minimum prices to be paid to growers for cacao beans.

In December 1946, a bill was ratified by the Dominican Legislature approving a contract for the creation of a company, Chocolatera Sanchez, C. por A., for processing cacao, sugar, coconut, and other materials used in candy making. About 80 percent of the cacao beans produced were to be allocated for purchase by Chocolatera Sanchez, which would have the privilege of processing them or of exporting them in the raw state. By March 1948, the Company had acquired necessary plant facilities and equipment, but it had confined its operations to the purchase and export of cacao beans. Early in March 1948, the Government of the Dominican Republic purchased Chocolatera Sánchez. It is still too early to determine what effect this transaction will have on the cacao-processing industry.

For many years, the United States has been the chief market for cacao beans exported from the Dominican Republic. In 1947, 97 percent of total exports were destined to the United States, compared with 94 percent in prewar (1935-39) years. Germany was the second largest importer of Dominican cacao in the prewar period. (See table 11.)

Haiti

Although Haiti has a cacao production of about 4 million pounds annually, the industry is much neglected. The cacao trees either grow wild or are semicultivated by natives. Little care is exercised in harvesting and fermenting, with the result that the beans are generally of poor quality. Climatic, and other, conditions in

Haiti appear favorable for cacao culture, and, with proper guidance, production probably could be considerably increased.

British West Indies

The decline in cacao production in the British West Indies has been marked. Trinidad and Tobago, the largest producers in this group, exported 63 million pounds of cacao beans in 1920 and 6.6 million pounds in 1946. Grenada, which exported 13 million pounds in 1910, exported about half that amount in 1946. Similar declines have occurred in St. Lucia, St. Vincent, and Jamaica. Diseases, hurricane damage, and competition with other crops, such as sugarcane and bananas, have brought about the reduction. Witches'-broom has been particularly destructive in Trinidad. Although a great deal of work is being done toward rehabilitating the industry, no marked increase in production is discernible as yet.

In Grenada, about 28,000 acres are devoted to cacao. This acreage is almost equally divided between small peasant holdings and large estates. There is no witches'-broom disease, and every precaution is being taken to prevent its introduction from neighboring Trinidad. Grenada Estates cacao is of exceptionally high quality. The careful way in which the beans are harvested and prepared for market is responsible to a large extent for their excellence, although the inherent qualities of the soil and plant varieties also are factors.

Exports of cacao beans from Jamaica of a little over 4 million pounds in 1947 were below the prewar (1935-39) average of 4.7 million pounds but considerably above 1946 exports of 3.2 million pounds. The cacao, classed as ordinary, is frequently of low quality, owing largely to the indifferent manner in which it is prepared. Steps are being taken to improve quality, however, by the Jamaican Department of Commerce and Industries, through which all exports of cacao are made. In Jamaica, the Government determines the price to be paid to the grower, and produce wholesalers collect the cured beans from the growers for a set commission.

The Department of Agriculture is working on a plan to develop an additional 30,000 acres for cacao cultivation. The project promises to be successful, since suitable land is available and witches'-broom disease has not been found. According to the last census, in 1943 Jamaica had 2.4 million cacao trees on scattered holdings, mostly in the hilly parts of the island. No calculation of the acreage was made.

Asia and Oceania

Ceylon

Although cacao was introduced into Ceylon early in the nineteenth century, it was of little importance there until about 1870 when destruction of coffee plantations by disease and insect pests caused the owners to try cacao. Production remained fairly constant from 1910 to 1943, with an outturn of between 6 and 8 million pounds annually. Since 1943, there has been a considerable decline in production. Exports in 1947 of 4.1 million pounds were about one-half the 1935-39 average.

Ceylon produces a fine grade of cacao, about one-half of which is grown on large estates and the remainder on small holdings of a few acres or less. The owners of large estates usually have equipment for drying large amounts of cacao artificially. The grower with a few acres may have small drying sheds with furnace and pipes below the floor which radiate heat, or he dries the cacao in the sun and tries to pick only during favorable weather. Estate-grown cacao is sent to Colombo to estate agents who

sell it to exporters. Native-grown cacao is usually sold to dealers in the villages, who in turn sell it to agents of the exporters. The cacao is shipped in bags of 140 pounds.

Cultivation is largely confined to the Kandy and Matale districts of the Central Province. In 1938, there were 34,000 acres planted to cacao. By 1946, acreage had dropped to 19,700 acres, according to the Ceylon Government Department of Statistics. The future of Ceylon cacao is difficult to predict. Maximum production for the country, owing to the limited amount of suitable land, probably is not far above the pre-war average of 8 million pounds. It appears that very little is being done, however, to reverse the present downward trend in production.

Netherlands Indies

Most of the Netherlands Indies cacao is grown on estates in Java and Madura. The industry was never very important because of competition with other crops and the prevalence of certain insect pests. The cacao is generally of high quality. When No. 1 Java Estates cacao was available, it commanded the highest price on the market.

During the Japanese occupation, the cacao plantations suffered from neglect and unskilled methods of cultivation, but very few were destroyed or abandoned. It should not be difficult, therefore, to restore production to the 1935-39 average of 3.3 million pounds annually.

New Guinea

The cacao industry in the Australian Mandated Territory of New Guinea was started by the Germans before World War I. All cacao is estate-grown. In 1940, there were about 2,550 acres planted entirely to cacao, of which 1,375 acres were not yet in bearing. In addition, 3,274 acres of cacao were interplanted with other crops, with about 2,000 acres not yet in bearing. Although data on production and exports for recent years are lacking, a considerable increase in production may be expected unless a great many trees were destroyed during World War II.

TABLE 11.- *Exports of cacao beans from the Dominican Republic, by country of destination, averages 1935-39 and 1940-44, annual 1945-47.*

COUNTRY OR CONTINENT	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946	1947
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
Mexico	209	1,979	5,362	5,065	-
United States	50,688	46,876	31,863	46,894	63,926
Cuba	-	60	3,327	1,957	720
Puerto Rico	74	276	411	410	159
Germany	2,434	-	-	246	-
Netherlands	187	329	-	179	1,026
Switzerland	-	-	-	-	303
Asia	381	179	-	94	-
Other	76	356	384	703	-
Total	54,049	50,055	41,347	55,548	66,134

Source: Official statistics of the Dominican Republic.

Western Samoa

The Mandated Territory of Western Samoa, formerly a German colony, comprises two large islands, Upolu and Savaii, and seven smaller islands. It is governed by New Zealand on behalf of the United Kingdom under a League of Nations Mandate, dated December 17, 1920. In 1883, the Germans introduced cacao on Upolu with Criollo stock from Java and Ceylon. Later Forastero hybrids were brought from Ceylon, with the result that hybrid types predominate in the islands today. The cacao is of fine quality. Production appears to have suffered no setback as a result of the war. In 1947, 5.3 million pounds of raw beans were exported, compared with the 1935-39 average of 2.3 million pounds.

Philippine Islands

Cacao trees grow uncultivated on all the Philippine Islands but especially in Luzon, Mindanao, and Negros. The industry has never been very important, although possibilities of expansion are good. In 1938, there were 2.2 million trees, covering about 3,900 acres, reported on the islands, of which 1.3 million trees were in bearing. Production that year amounted to 2 million pounds. Since production is not large enough to meet domestic requirements, cacao products are imported to make up for the deficiency.

New Hebrides

The New Hebrides group of islands is governed under a British-French condominium. Cacao growing, which is an important industry in the islands, is largely in the hands of the French. All the cacao is plantation-grown. Exports during the years 1935-39 averaged 3.9 million pounds annually. In 1945, a little over 2.5 million pounds were exported, but the reason for the decline was not reported. Production is subject to considerable variation owing to damage done by tropical storms.

WORLD CONSUMPTION AND TRADE

World consumption of cacao beans, as measured by net imports of the principal countries, increased about sevenfold from 1900 to 1938, or from about 220 million pounds to 1,462 million pounds, with a high of 1,550 million pounds in 1936. The United States, the leading market for cacao, accounted for about 40 percent of total world consumption in the prewar (1935-39) period. The United Kingdom, Germany, the Netherlands, and France were the other important users, taking about 35 percent of net world imports.

Remarkable though the increase in world consumption has been, prior to the World War II it was not large enough to keep pace with the expansion in production. World supplies from 1930-39 were in excess of world requirements. Prices fell to very low levels in 1932 and 1933, recovered somewhat from 1935 to 1938 and then, in the case of Accra, fell to new lows in 1939. (See table 3.) Stocks in consuming countries from 1935 to 1939 were large. This was the situation at the beginning of the World War II. At the end of the war, the picture was very different. Stocks in most consuming countries, with the possible exception of the United Kingdom, were small, and world production was insufficient to meet requirements. Following removal of United States ceiling prices, effective October 24, 1946, prices for all types of cacao beans rose rapidly and have continued at high levels (table 3).

As a result of the world shortage, international allocation of cacao beans, as recommended by the International Emergency Food Committee, has been continued until September 30, 1948. The first allocation of cacao beans was recommended by the Combined Food Board in July 1944 and was approved by the United Kingdom, Canada, and the United States. This allocation covered only cacao under control of the West African Produce Control Board and was for the period January-September 1944. Each year thereafter new allocations were made on a crop-year basis, that is, October 1 to September 30, and covered total world exportable production. The general pattern of world cacao trade in recent years has been governed by the allocation program. (See tables 12 and 13.)

If the supply of cacao beans in the United States has been ample during and since World War II, consumption undoubtedly would have increased greatly, because consumer purchasing power has been at record levels. In 1910, per capita United States consumption was placed at 1.4 pounds (raw-bean basis); by 1941, it had increased to 4.8 pounds; and since then it has declined because of insufficient supplies. Scarcity of shipping facilities during the war made it impossible to move Africa

TABLE 12.- *Net imports of cacao beans into principal importing countries, averages 1935-39 and 1940-44, annual 1945-47.*

COUNTRY	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946[1]	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
United States[2]	576,650	560,793	620,144	593,495	598,529
Canada	27,464	42,175	51,249	67,961	38,265
Argentina	[3] 11,236	14,580	21,376	18,352	18,099
Austria	[3] 14,417	(4)	(4)	(4)	(4)
Belgium-Luxembourg	[3] 23,004	(4)	(4)	(4)	(4)
Czechoslovakia	[3] 25,413	(4)	(4)	1,474	18,580
France	98,305	[3] 77,627	47,346	88,283	89,995
Germany	169,961	[3] 44,506	(4)	(4)	(4)
Italy	19,256	[5] 9,323	(4)	10,433	[6] 16,005
Netherlands	146,226	[7] 48,456	3,860	85,483	88,316
Norway	7,448	2,144	3,395	8,695	7,732
Poland and Danzig	[3] 15,922	(4)	(4)	(4)	(4)
Spain	[8] 22,886	29,464	32,438	29,584	[9] 17,220
Sweden	14,827	13,262	11,437	21,482	17,194
Switzerland	19,315	15,855	13,841	31,362	20,530
United Kingdom	239,115	314,021	193,095	264,033	231,296
Union of South Africa	2,678	13,234	7,682	9,145	(4)
Australia[10]	14,982	21,080	28,092	49,679	(4)
Total	1,449,105	1,206,520	1,033,955	1,279,461	-

1 Preliminary.
2 Cacao shells included 1935 through 1938 and in 1947.
3 4-year average.
4 Not available.
5 3-year average.
6 January-November only.
7 Year 1940 only.
8 Year 1935 only.
9 January-June only.
10 Year ended June 30 beginning with 1940.

Source: United States Department of Commerce, statistics of foreign governments, and United States Foreign Service reports.

TABLE 13.- *Exports of cacao beans, from principal producing countries, averages 1935-39 and 1940-44, annual 1945-47.*

COUNTRY	AVERAGE 1935-39	AVERAGE 1940-44	1945	1946[1]	1947[1]
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
THE AMERICAS					
Costa Rica	14,356	11,416	2,881	8,750	10,552
Nicaragua	792	380	289	897	598
Panama	10,418	6,089	817	4,781	6,509
Cuba	93	55	-	-	-
Dominica	315	330	297	[2] 280	[2] 250
Dominican Republic	54,049	50,055	41,347	55,548	66,134
Grenada	8,536	6,868	6,522	5,804	[2] 6,000
Haiti[3]	3,349	3,173	2,787	2,765	4,194
Jamaica	4,750	4,216	1,996	3,191	4,067
Trinidad and Tobago	31,635	14,477	7,732	6,627	8,979
Brazil	263,980	233,109	183,938	287,613	218,350
Ecuador	42,372	31,442	37,097	35,517	43,324
Venezuela	36,934	31,432	27,696	28,810	22,900
Total	471,579	393,042	313,399	440,552	391,857
AFRICA					
Belgian Congo	2,809	2,265	4,345	2,406	2,402
French Cameroons	58,349	56,130	84,762	73,975	[2] 82,000
Ivory Coast	109,937	58,313	59,399	62,562	[4] 61,153
French Togoland[5]	20,630	7,168	6,349	4,074	[2] 4,000
Gold Coast[6]	609,363	428,705	484,359	529,348	396,789
Nigeria[7]	216,318	184,528	172,489	224,417	248,134
Angola	679	399	227	873	784
San Thomé and Principe	22,496	14,837	17,382	22,734	[2] 20,000
Fernando Po	[8] 25,168	[9] 29,020	32,436	[2] 33,000	35,715
Madagascar and Dep.	665	335	410	281	306
Total	1,066,414	781,700	862,158	953,670	851,283
ASIA AND OCEANIA					
Ceylon	7,931	7,359	4,524	3,051	4,097
Neth. Indies	3,348	534	(10)	(10)	(10)
New Hebrides	3,916	3,351	2,646	[2] 3,000	[2] 3,000
Western Samoa	2,326	3,469	4,402	4,224	5,327
Total	17,521	14,713	11,572	10,275	12,424
Grand Total	1,555,514	1,189,455	1,187,129	1,404,498	1,255,564

[1] Preliminary.

[2] Estimated.

[3] Year ended September 30.

[4] 11 months.

[5] Includes some Gold Coast cacao.

[6] Includes British Mandated Togoland.

[7] Includes British Mandated Cameroons.

[8] 3-year average.

[9] Imports into Spain.

[10] Not available.

Source: Office of Foreign Agricultural Relations. Official statistics of foreign governments and Foreign Service reports.

cacao to the United States in the quantities desired, and production in the American producing countries was not sufficient to meet the needs of the United States, Canada, and other users in the Western Hemisphere. Consumption in the United States during 1948 will be held to less than the prewar level, since the country's 1947-48 allocation of 569 million pounds is less than the average prewar net import of 576.6 million pounds.

Net European imports in 1946 appear to have been about one-third less than the 1935-39 average of 827 million pounds. Switzerland imported more cacao beans in 1946 than before the war. The Netherlands and France made progress toward regaining their prewar average. Germany, one of the largest prewar consumers, is for the time being practically eliminated from the picture. Imports into Canada, South Africa, Argentina, and Australia increased markedly during and since World War II. On the basis of data now available, total net imports into the world's principal cacao-consuming countries in 1946 were about 12 percent less than the 1935-39 average. (See table 12.)